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# THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN  
1861.

Chicago, Ill., May 7, 1884.

VOL. XX.—No. 19.

## THE WEEKLY EDITION OF

THE AMERICAN  
BEE JOURNAL

PUBLISHED BY  
**THOMAS G. NEWMAN,**  
EDITOR AND PROPRIETOR,  
925 WEST MADISON ST., CHICAGO, ILL.  
Weekly, \$2 a year; Monthly, \$1.

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**THOMAS G. NEWMAN,**

925 West Madison Street., Chicago, Ill.

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**X** SUBSCRIBERS whose papers reach them with this paragraph marked with a blue pencil, will please take notice that their subscriptions will expire at the end of the present month. Such are marked thus on the label, "May 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the BEE JOURNAL without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. If there is any mistake made, notify us at once.

"HOME SCIENCE" is the title of a new serial, published by S. R. Hopkins, 29 Warren St., New York, and by Sir Partridge & Co., London, at 25 cents a number. The first number is on our desk, and contains articles from the pen of Rev. T. DeWitt Talmage, D. D.; Rev. Robert Collyer, D. D.; Prof. E. P. Thwing, Ph. D.; Dio Lewis, M. D., and others. It is beautifully printed, well edited, well worth the price, and we wish it much success.

The Keystone Bee-Keepers' Association, will meet in Scranton, Pa., on Tuesday, April 13, at 10 a. m.  
GEO. C. GREEN, Sec.

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**Das Pferd und seine Krankheiten**—Von W. J. Kendall, M. D., enthaltend ein alphabetisch geordnetes Verzeichniss der verschiedenen Pferdekrankheiten, sammt den Ursachen, Symptomen und der richtigen Behandlung derselben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

**THOMAS G. NEWMAN.**

925 West Madison St. CHICAGO, ILL.

# Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., MAY 7, 1884.

No. 19.

**THE AMERICAN  
BEE JOURNAL**

Published every Wednesday, by

**THOMAS G. NEWMAN,**  
EDITOR AND PROPRIETOR.

## Foul Brood and the Neb. Convention.

At the last meeting of the Nebraska Bee-Keepers' Association, as reported in the BEE JOURNAL for Jan. 23, a committee was appointed to investigate the cause of the existence of foul brood in that State, and to confer with the Authorities in regard to its suppression by legal measures. The Committee, after much deliberation and correspondence, have made the following report, which has been adopted by the State Association:

To the President and members of the Nebraska Bee-Keepers' Association.

LINCOLN, Jan. 10, 1884.

WHEREAS, The disease of bees known as foul brood, is regarded as one of the most malignant of bee maladies, often destroying whole apiaries despite the efforts of the apiarists, and

WHEREAS, The disease is known to be in our state in at least three counties, and

WHEREAS, Flanagan & Illinski, of Belleville, Ill., have shipped bees to M. L. Trester, of our State, affected with foul brood, and

WHEREAS, The disease is known to be a fungus growth, and also contagious. Therefore, be it resolved by the Nebraska State Bee-Keepers' Association:

1. That the bee-keepers be earnestly requested to examine their colonies closely, whether they suspicion foul brood or not.

2. That those who expect purchasing either bees or queens, first satisfy themselves that the party from whom they purchase has not the disease in his apiary.

3. That we would recommend the most rigorous method of destroying the disease wherever found, even to the total destruction by fire of bees, comb and hives.

3. That a copy of these resolutions, together with a concise statement as to what foul brood is, be published in

the leading dailies of the State, with a request that the county papers please copy, and that copies be sent to the leading bee papers and periodicals of the United States.

(Signed.) R. V. MUIR,  
G. M. HAWLEY,  
H. CULBERTSON,  
Committee.

LINCOLN, Neb., March 1, 1884.

To the Executive Committee of the Nebraska State Bee-Keepers' Association, and all other Apiarists.

The undersigned, a committee appointed at the last annual meeting of the Nebraska State Bee-Keepers' Association to investigate the transactions in bees diseased with foul brood, beg leave to make the following report, without malice to any one, but in justice to all.

We find that foul brood has made its appearance in the central part of our State, but up to date, we have not been able to discover its origin.

We also find by the written records and correspondence of M. L. Trester, late of Greenwood, and now of Lincoln, Neb., that on July 20, 1883, he received 20 nuclei of Flanagan & Illinski, of Belleville, Ill., which has proven to have been diseased or infected with foul brood when shipped from Belleville, as shown by the following facts:

When the bees were received, each nuclei was transferred, and a written statement of the condition of each sent to the shippers, and as shown by the duplicate copy numbers 3, 7 and 11, were marked as having rotten brood; but not knowing foul brood at sight, it was watched with suspicion until Sept. 17, when it began to develop, showing it to be foul brood, when a lengthy correspondence between the receiver and the shipper was carried on (which we abbreviate as much as possible) as follows:

FLANAGAN & ILLINSKI: The bees I bought of you were infected with foul brood, and it has spread in my apiary. I expect you to make the damage good. Let me hear from you immediately. Greenwood, Sept. 20, 1883. M. L. T.

M. L. TRESTER: Yours received, and is a great surprise to us. Trust you are mistaken; but if not, what is the damage and mode of reparation? F. & I.

F. & I.: We ought to say in self-defense, that we never saw a case of foul brood in our lives until this spring, and then it was instantly suppressed by cremating every hive. F. & I.

M. L. T.: One of us will try and meet you at the bee-keepers' meeting in Chicago, on the 17th and 18th. Please act with caution, as any damage to our credit makes it less in our power to settle to your and our own advantage. We want to see you and talk the matter over and settle it in a friendly way. F. & I.

F. & I.: Yours of 5th received. I want \$1,000 damages, and want to see one of you in Chicago on the 17th or 18th inst. M. L. T.

Greenwood, Oct. —

Mr. Trester's memorandum here shows that he met Mr. F. in Chicago, Oct. 16 or 17, and almost F's first words were, "be cautious," as any injury to F. & I. would make them less able to pay. F. also stated that he knew that they had had foul brood in their apiary during the spring of 1883, but thought that they had eradicated it. F. told T. he could prove nothing at law, when T. told F. that he would bring the men who worked for and helped destroy the infected colonies, to prove that F. knew the dreadful tendency of the disease. F. also told T. that he had come to Chicago on purpose to see him to keep from being exposed. F. also stated that he had also sent foul brood bees to Mr. —, Mass., who knew the disease when he saw it, and returned the bees.

T's memorandum shows that the matter must be made public, and insisted that F. remove his advertisement from the bee-papers and insert one in the same place, notifying the public that he would have no bees for sale for two years on account of foul brood. T. then made the following propositions:

First—That if F. & I. would pay him \$500 he would call the matter settled between them.

Second—T. offered to sell F. & I. every colony of bees that may be alive April 15, 1884, also supplies on hand, value to be fixed by arbitrators.

Third—T. offered to take any amount of damage was agreed by the arbitrators. Said arbitrators in the above cases to be chosen as follows: One by F. & I., one by T., one by the president of the N. W. B. K. A.

Mr. F. then made a proposition that if F. & I. accept one of T's propositions, T. was to bind himself to keep the transactions a secret, which T's memorandum shows he would not agree to.

M. L. T.: After due consideration, we have concluded to send you in a few days, in cash, the amount we think is fair and right in regard to bees sent you last July. F. & I.

Belleville, Oct. 18, 1884.

F. & I.: At the time I bid adieu to Mr. F. in Chicago, I was of the understanding that as soon as he arrived at home, and you consulted together, he would write and accept one of my propositions, but all I have heard is a line saying you would send me some money to pay damage. I write this to remind you that I expect the \$500 in full before the 20th of this month. M. L. T.

Greenwood, Dec. 13, 1883.

M. L. T.: You are, no doubt, tired of waiting on us. Have a little more patience. We will send you in a few days the amount we think fair and right. F. & I.

M. L. T.: We will send you at the earliest opportunity the amount we believe to be fair and right. If you can wait until we can do this, which, we hope, will not exceed ten days, well and good. If not, all right; do as you think best in regard to the matter. F. & I.

Belleville, Dec. 31.

F. & I.: Yours of 31st inst. received. Let me hear from you before our State meeting, which convenes on Jan. 9. I am ready to place this matter in the hands of arbitrators at any moment. Lincoln, Neb., Jan. 3, 1884. M. L. T.

M. L. T.: We send you to-day, per express, \$95, which we tender you as in full of all demands to date for damage (if any) done you. Please sign the enclosed receipt and return per express and oblige. F. & I.

Belleville, Jan. 14, 1884.

Mr. Trester informs your committee that he did not accept the money on its arrival, on account of the case being placed in the hands of a committee, and in a short time F. & I. telegraphed for it to be sent back to them; but that he is still ready and willing to place the matter in the hands of arbitrators to be chosen similar to the mode proposed by him in Chicago.

Desiring to do exact justice in this very unpleasant affair, we sent the proof of the above to Flanagan &

Illinski, and asked them if they had anything to say. If so, to send it on and have it published in the same paper, so that our readers would not be troubled with a prolonged personal controversy. The following is their reply:

The best and most careful of us are liable to blunder, and do, unintentionally, that which we would not knowingly do for any consideration. We can truthfully say that we never saw (to our knowledge) a cell of foul brood until last May. When the discovery was made, prompt and efficient measures, as we then thought, were taken to eradicate it. We were mistaken, however, as events proved, for as seen above, Mr. Trester claims that we sent him 20 nuclei, some having foul brood, and demanded the modest sum of \$1,000 damages. At a personal interview with him at Chicago, in October, he moderated his claim to \$500. On asking him, if we paid the sum demanded, whether that would be the end of the matter, he answered, "That he would not forego the pleasure of exposing us, if we paid him \$1,000." All this because, by accident or oversight, we had unfortunately sent him a few (2 or 3 perhaps out of 20) nuclei (taking his word for it) infected with foul brood.

After consulting some of the best bee-keepers of our country, who had been troubled by this disease, and had been successful in getting rid of it, and after carefully weighing the whole matter, we deemed it fair and right to return the purchase money, and we sent him \$95, the full amount received from him for 20 nuclei. This money he refused to receive, but tried to levy on, or attach it, so that he may obtain it without giving us a receipt in full of all damage; but the money was returned to us before he could accomplish his design.

At the meeting, where the foregoing resolutions were passed, his denunciations, etc., were so violent, that when strangers to us, who did not like such unfair treatment, tried to take our part, they were speedily "sat down on." These facts are susceptible of proof; and show, better than any words of ours, the spirit which actuated him.

Any man of business can see that, to knowingly sell diseased bees would be suicidal, and would justly result in utter ruin, financially and otherwise. We have too many thousands of dollars invested in this business, and our reputation is too dear to us, to be guilty of such folly. We certainly are as much interested in the suppression of this pest as any one can be, and perhaps more so, as our interests are larger. It is very unjust to report that we are scattering it through the land.

FLANAGAN & ILLINSKI.  
Belleville, Ill., April 25, 1884.

P. S. I wish to add that if any one has blundered, any mistake made, or any one wronged, that I alone am to blame for it, and that my partner, A. X. Illinski, M. D., is not responsible for my mistakes, as I have had the

entire control and management of the business, and if any are blame-worthy, it is I. I make this statement without the Doctor's knowledge, because I deem it but just. I will also say that had I acted with ordinary judgment, I would have laid the whole matter before the Northwestern Association, held in Chicago last October, and I regret exceedingly that I did not do so. I have tried to act fairly, and have nothing to take back or deny.

E. T. FLANAGAN.

Having given both sides of this controversy, we cannot consent to burden our columns with any arguments *pro* or *con*. The disease is much to be dreaded, and the action of the Convention in taking measures to "stamp it out," is praise-worthy, and in the interest of the bee-keeping public. To do this, and still preserve friendly feelings on all sides, is quite an undertaking—perhaps an impossibility. The only way to arrive at an amicable adjustment, is for each one interested to do exactly as he would be done by; and when stipulating for that adjustment, to "put himself in the other's place."

## SELECTIONS FROM OUR LETTER BOX

### Dry Sugar for Bees.

On page 245, Mr. H. Richey has credited me with a wrong statement. He quoted me thus: "Mr. Henry Alley thinks dry sugar is the best food for bees, if water also be given." If Mr. R. will read my article again, he will see that I made no such statement. Mr. R. recommends syrup made from granulated sugar and water, for wintering bees. Well, I know that is good, and said so, certainly 20 years ago, as Mr. R. will find if he will look over the BEE JOURNAL as far back as that time. If it were not for sugar, I could not winter my bees sometimes. That is all the food they have had here for the past two years.

HENRY ALLEY.

Wenham, Mass., April 23, 1884.

### My Bees are Booming.

The bees in this locality are doing splendidly now. I put into the cellar, last fall, 54 colonies, some of them rather scant in stores. This spring I took out 51 alive, and 3 of which were quite weak. Of the 3 I lost, the rats destroyed 1, and 2 starved. There was no diarrhoea, except a little in 2 colonies, which have done well since they were set on the summer stands. I have sold 8 colonies, leaving me 40 in healthy condition, and which are now booming. The prospects are splendid for a general good time with the pets this year.

H. J. SCOLES.

Knoxville, Iowa, April 26, 1884.

### Bees Separated all Right.

The bees which were so heated in March, separated all right, and came out without the loss of a colony, that had a queen when put into the cellar. I found 5 in the lot of 225 that did not have a bee in their hives, and in each case they had not had a queen since last June.

IRA BARBER.

DeKalb June., N. Y., April 26, 1884.

### Bee-House Burned.

On April 23, my bee-house containing some fixtures, was destroyed by fire. If the wind had been in the south, my bees would have been burned, as they were within 10 feet of the house. On the same evening they were gathering pollen as if nothing had happened. Box-elder is in full bloom.

H. CLARK.

Palmyra, Iowa, April 25, 1884.

### Dearth of Honey in Cuba.

We are having a slight dearth of honey now, the first in six months, and yet it is not what we used to experience in California; for, now the bees begin work in the morning just as soon as there is a bit of light, and work till about 8 a. m., then lay off till about 5 p. m., when honey flows again, and continue until it is so dark it would seem impossible for them to find their hives. They work with great ambition, so they are holding their own, and want does not stare them in the face very badly yet. The honey flow for the last six months has excelled anything I ever saw in any country. I am not yet prepared to tell the readers of the BEE JOURNAL what we have done in the way of modern bee-keeping in Cuba; but if Providence spares my health till the year is up, I will then tell to the world, through the columns of the BEE JOURNAL, what I know about bee-keeping in the West Indies. The weekly visits of the BEE JOURNAL are refreshing to one so far removed from home and friends, and the perusal of its pages is a rare treat; and one pleasing feature is, it never fails to come when it is due.

A. W. OSBURN.

San Miguel, Cuba, April 16, 1884.

### Cold Spring.

Spring is backward and cold. I put 450 colonies into winter quarters, last fall. I have not yet set all of them out, and so cannot say how they have wintered, but I think the prospect is good.

J. R. TURNICLIFF.

Van Hornersville, N. Y., April 23.

### Wintered without Loss.

Our bees wintered without loss; also those we had taken out of trees and transferred to movable comb hives, wintered all right. One was taken out and transferred as late as September. Some of my neighbors have lost heavily, and some lost all. We use chaff protection. Drones are flying to-day.

N. E. COTTRELL.

Burdick, Ind., April 24, 1884.

# CORRESPONDENCE

For the American Bee Journal.

## Anti-Monopoly.

WM. F. CLARKE.

That it is possible to overstock an apicultural area is readily admitted; but how many colonies of bees are sufficient to do it, is a point on which there is difference of opinion. I have an impression that Mr. Heddon underestimates the honey-yielding capacity of his own locality, and that, while there is a substratum of truth in what he says, he betrays the over-sensitiveness of a professional specialist, and is too much enamored with the charm of monopoly. But, be this as it may, I wish to submit to Mr. Heddon and others of his way of thinking, that "locating and occupying a field" by no means covers the whole ground of this discussion. It also embraces the important point of enlarging a field by providing bee pasturage.

Mr. Heddon's article assumes that a field is to be estimated according to its honey resources as developed by accident. It does this by implication rather than by direct assertion. But, next to the question how much honey a locality will yield left to chance, there arises the question what more it may be made to yield by a judicious provision of plants that produce the luscious nectar which bees love to gather? This question has not escaped Mr. Heddon's attention. Few things do that have any bearing on apicultural success. He has bought a tract of land out of the profits of bee-keeping, and is growing a variety of honey-yielding plants. He has sown the waste places around Dowagiac, even the gravel-pits with melilot, and shows visitors, with pride, the rapidly-increasing breadth of this and other bee forage.

This may be done to almost an unlimited extent. There are districts in Germany where bee-keeping is the leading industry, and where the farming is carried on with a special eye to providing for the bees. "God bless the bees" is a common petition in the public prayers of the pastors in those localities, and as we should always try to answer our own prayers when we can, the people sow honey-producing plants, by means of which both the bees and the bee-keepers are blest. Bee-keeping is yet in its infancy in many respects, in this matter of providing bee forage among the rest, and by-and-by we shall not only ask, Is this a good field for honey-gathering, but is it capable of being made one? Or, being already good, can it be made better?

Mr. Heddon looks at this matter too exclusively from the stand-point of bee-keeping as a specialty. Now, while I believe it absurd to expect every man to be his own honey-producer, and hold that none should keep bees but those who have natural and acquired qualifications for so

doing, I consider that there is a legitimate sphere for bee-keeping in a small way, in the case of many persons who are not professional apiculturists. The old British idea that bees are properly part of the livestock of the farm, and that no farm is completely stocked unless it can boast a few hives, is, to a certain extent, correct. A mixed husbandry is the true theory of farming. There are cases in which a farmer may wisely devote his attention to some agricultural specialty, but they are few and rare, compared with those in which the true policy is to raise a variety of products. As a rule, a farm should produce not only milk, but honey. A well-managed bee-hive is as profitable as an average cow. Make allowance for the proportion of farmers who have no natural aptitude for bee-keeping, or will not qualify themselves for taking intelligent care of bees, and still there are a large number left who might easily keep 10 or 12 colonies of bees each, and find the profit of so doing a helpful item in the yearly income. Usually, there is a member of the family whose duties lie in the house, who could hive a swarm of bees; or, at any rate, watch at swarming time, and blow the horn to call the farmer up from the field when there is hiving to be done.

Besides the farmers who might keep bees on a limited scale to advantage, there is the village shoemaker who would find it a pleasant change from his bench to look after a few colonies. The woman who takes in washing, the poorly-paid school-master or minister, and a host of others. The professional gardener does not argue that because he has started a market garden in a neighborhood, others must keep out the business and people in general abstain from making gardens. Even at horticultural shows, there is a distinction recognized between the amateur and the professional, and the legitimacy of gardening on a small scale, and as a side-show, is admitted.

A woman, compelled by circumstances to wash for a living, could make more money with less toil and far more independence, by keeping 10 colonies of bees, provided she has, as many women have, a natural aptitude for bee-keeping, with the addition of the acquired knowledge and experience, and much as I like a well-ironed shirt, I should rather see her a bee-keeper than a washer woman; not because I think the latter calling menial, but because the former is less laborious, and gives more scope for intelligence and the indulgence of a lady's tastes and instincts. Mr. Heddon will, perhaps, reply that he had not these classes in view when he penned his article, but whether intended or not, it seems to me that the whole tenor of his argument is calculated to discourage the small bee-keeper; and, looking at the matter from the broad standpoint of the apicultural interest at large, I do not think it is good policy, or strict justice, to do this even undesignedly.

Well, then, to join issue fairly and squarely, let us look at the Kendall

illustration. It proceeds on the assumption that where one bee-keeper (professional) locates, according to the old Scotch song, "There's nae room for twa." The same ground might be taken as to village store-keeping. It is a small place, and a merchant is already in the field. He is doing a good business. Another spies out the spot, and thinks he too will open out there. "My friend," says number one, "I can do all the trading needed here. If you start business beside me, you will seriously lessen my profits, and make very small ones yourself. I calculate to enlarge my store if necessary, and to keep pace with the growth of this village. I want to make a big thing of it, and if you commence, I will undersell you, and drive you out of the field." "Sir," says number two, "I shall be satisfied if I can make a comfortable living, and save somewhat. I like this place, believe it will grow, and think there is enough for two of us, if we are not over covetous and ambitious."

It is not a case of "the survival of the fittest," but a question whether number one shall permit another to "share in his good fare." They go to work, each having his business wits sharpened up to the keenest possible edge. Both become shrewder merchants because of the competition, both are more anxious to build up the place that each may do a better business, and after a little unfriendly rivaling, both learn to "live and let live." Human nature likes to take the cake and eat all of it; but it is often unavoidable and always benevolent to let somebody else have part of it. That we should respect the rights and interests of others, is most true, but it is not always easy to define those rights and fix those interests. It would be a long time before a village would have a second store, if the prior consent of merchant number one must be had before starting it. The fact is, there are many positions in life which can only be held by the personal ability of the occupant. Rivalry and competition cannot be prevented. We must accept the challenge of Rhoderick Dhu to Fitz James:

"For this is Coil-and-tangle-ford,  
And thou must keep it with thy sword."

The village doctor, the village backsmith, the village hotel keeper, and last, but not least, the village clergyman, are in the same fix as Mr. Heddon. If they are as competent as he is in their several walks of life, they will hold their own as he has done, or move to "fresh fields and pastures new," as he will doubtless do, when another Heddon mightier than he shall get a footing in Dowagiac. There is too much of the white feather about this "keep-away-from Dowagiac" proclamation. I would rather hear Mr. Heddon exclaim with Fitz James:

"Come one, come all, this rock shall fly  
From its firm base, as soon as I!"

Mr. Heddon says: "Never locate in a field already occupied," and he explains "occupied" to mean that it has already in its limits a bee-keeper who

either has stocked it to its utmost capacity, or intends doing so. "Let us figure," as Mr. Heddon observes. In a given locality there is a bee-keeper who has 200 colonies, and considers that about enough for the field. This, I think, is not far from the average which Mr. H. thinks sufficient for Dowagiac. Another bee-keeper comes along. For reasons cogent to his own mind, he would like to settle in that particular spot. He surveys the field, and concludes that it is rich enough to give 500 colonies all the work they can do. Certainly he is not "mean," because he honestly holds that opinion, and if it turns out correct, he is not "mistaken." But Mr. Heddon, in advance, assigns this man a place in "the ranks of the mean or mistaken." Or, to suppose another case. In a particular spot, there is a bee-keeper with 50 colonies. These give him a better living than the mass of farmers get off 100 acres of land. Another bee-keeper, who would like to settle there, talks with this man, and finds that as fast as his means allow, he intends to increase the number of his colonies until he has fully stocked the field. Bee-keeper No. 2 reasons "thusly." This man is making a comfortable living now. He can double or treble his present colonies, and still leave me scope enough. I can keep 100 or 150 colonies, quite as many as I care to be bothered with, and not interfere with him. Is he a very near relative "to the knave or fool" if he decides to locate there? So Mr. Heddon affirms. But I fail to see the justice of this opinion, and I think the great mass of common-sense bee-keepers will agree with me. Mr. Heddon says, "there are plenty of unoccupied areas." But there are thousands of instances in which people want to live in a particular locality. It matters nothing that "there are plenty of unoccupied areas" elsewhere. "The world is all before us where to choose," and if a man honestly believes that there is an opening for him in a place where he wants to be, and that he can settle there without improperly trenching on the rights and interests of his neighbor, is it right to hurl such epithets as "knave," "fool," "mistaken," "usurper," "mean," at his luckless head? I venture to think it is not.

I do not know where Mr. Heddon will rank me after he has read this article, whether among "the froth of the profession," the "self-interested," or the "honest and sincere," but I do know that I have written from the best of motives, and with no other wish than to benefit the interests of bee-keeping and bee-keepers. While I do not wish to blow a trumpet for the purpose of rallying a multitude of recruits, who, when gathered, will only increase "the awkward squad" of unsuccessful bee-keepers, I do want to see more general attention directed to bee-keeping, not only for the sake of adding to the already large army of specialists, but in order to increase the means, and add to the comforts of multitudes of people whose incomes are scanty, and who might easily supplement them by be-

taking themselves to bee-keeping in a small way. I will also own that I greatly prefer to have a large number of those who keep about so many bees as they can personally manage well, rather than a comparatively few monopolists who have to depend largely on hired help with the attendant disadvantages admitted by Mr. Heddon in the article I am criticising.

I prefer this for reasons similar to those which lead me to prefer the state of things on this continent, where a large number of farmers each owns his 10 acres or thereabouts, to the state of things in Britain, where a few own the entire public domain. "The greatest good to the greatest number" is what I desiderate.

Speedside, Ont.

For the American Bee Journal.

### New Races of Bees—Fertile Workers.

JOHN HEWITT.

Mr. G. M. Doolittle, in the BEE JOURNAL for 1883, page 500, gives his opinion regarding these bees, and after reading his letter very carefully, I came to the conclusion that he is very much mixed about these bees, and that the new races of bees he has, are mixed also; and as there are many more people in America who have mixed bees, and are entirely in error regarding their true character, I write this hoping that it may be of some use in removing the errors and putting these bees in their true position.

The Eastern bees, bred and sent out by Mr. Benton, consist of the Cyprian, Palestine and Syrian races. Mr. D. speaks of Syrian and Palestine as identically one; but this is not so; there is more difference between them than between hybrids and Italians, both in color and disposition. How these bees came to be considered as one, I am puzzled to find out; but the error applies not only to America, but to some extent to England also.

In *Gleanings* for 1883, page 169, H. B. Harrington says: "We reared quite a number of queens from Mr. A. I. Root's Mount Lebanon queen, and as we took great pains to secure drones from our Bethlehem queen, we think we have as pure Holy Land bees as can be found."

Now, if it is remembered that Mt. Lebanon is in Syria, where Mr. Benton rears his Syrian queens, and that Bethlehem is in Palestine, where he also has an apiary, it is plain that Mr. H. reared only cross-breed queens. As to that part of his statement which I have italicized, I have no doubt he is quite correct; though I think he would have found that there was a great difference, had he reared some Syrian drones as well; but this he, no doubt, prevented in order to avoid the chance of in-and-in breeding.

Prof. A. J. Cook, in the *Bee-Keepers' Magazine* for 1883, page 223, very fairly describes the Syrians; but at the end of his article, the "Ed." says: "If the word 'Syrian' is altered into 'Holy Land,' all confusion will be

avoided." And so the error has spread from teachers to pupils. The Syrian bees are so much like Cyprians, in fact, very much more so than Palestines, that I think it highly probable that they have been taken for each other, and so mixed up.

To describe and compare these bees one with the other, in every particular, would make this article a very long one; but to give a few features, will be advisable.

For instance, all 3 races are smaller bees than either blacks or Italians; but when crossed with either kind of drones, the offspring are of the same size, and the Syrians show the 3 yellow bands; though in the black cross the shade is darker; but still they are all evenly marked like pure Syrians. The queens of the 3 races seem duplicates of each other, and I cannot tell one from another; so I think if all 3 races were mixed and bred into each other, the queens would still look like pure ones of either race.

The Syrian drones carry an orange-colored band, but the Palestine bees do not; in fact, if it were not for the gray, fuzzy hair on them, they would pass very well for black drones. Then if you open a hive containing Syrians, when the sun shines, you may do so with impunity, without any protection, preparation, or attempt to quiet them whatever, providing they are not jarred, smoked or allowed to smell it. This is a fact which smokers cannot comprehend, thinking they must require some kind of "doctoring" to be able to manipulate them; but this is not so, for unlike blacks or Italians, they are naturally very tame, as may be proved by sitting close to a hive entrance at any time, to watch them; while the Palestines must be smoked, and then the manipulations must be quietly and quickly performed, as they quickly empty their sacs of honey, and they cannot be made to regorge themselves; at least I never could make them do so.

I will now describe the Syrian bees, as it is with these I have had the most experience. They are the ones I like the best, and they will yet make their mark. They are the most peaceable bees I have ever seen, and I should have no hesitation in placing 50 or 100 colonies around my house door without the slightest fear of any one ever being stung.

In opening them (which I always do while the sun is shining), I draw the quilt off diagonally, very gently, when up comes some bees, trying to feel the sky with their lances, and stretching upwards as much as possible to accomplish it. They are not cross when in this condition, nor if they take wing. I then commence immediately to remove the combs; and if it is June or July, I find in a full colony 28 square feet of combs full of brood in one stage or another. This brood is all in one compact mass, completely filling the frames, which are 14x10 $\frac{1}{2}$  inches. The bees will be quietly sitting on it, as if nothing were going on, and being smaller than blacks, and never gorging themselves with honey, they look like a

host of beautiful little flies. Those which do take wing, just buzz about without any inclination to sting, and if a comb is wanted out, all that is needed is to give it a shake, and the bees drop off into the hive bottom, and run up amongst the other combs.

The hive or combs must never be jarred; but if you want to see them savage, just smoke them, and jar the hive (like you would blacks or Italians), and I do not care how you are dressed or protected, you will be well stung.

They are the most energetic workers I have seen, and this trait is improved when a Syrian queen is mated with a black drone; but the character of the Syrian is changed with the cross, for they require a dose of very dense smoke to quiet them, but on no account must they be jarred; for when roused they are worse than pure Syrians at stinging, besides they sting deeper, draw blood, and it is much more painful. They rear and pack brood just the same, and collect more honey.

I think this will reconcile some of the very conflicting accounts of these bees, and I should think some of the bees which have been sent out for the Cyprians and Syrians, have had a fair share of Italian blood in them to stand the smoking with which Mr. D. doses them.

All my Eastern queens have been obtained direct from Mr. Benton, and every one came from her native land; so I speak with confidence as to their purity.

In the second part of Mr. D.'s letter, he condemns their brood-rearing powers, and says the secret of honey getting is to have the bees just in the niche of time. I think here he is quite at sea as to their real best nature. There have been proposals enumerated to get two queens to lay at one time in the same hive, so as to get an enormous population and economize the heat. Here the problem is practically solved; for we have one queen capable of laying double the quantity of eggs of an ordinary good one, or 26,000 per week.

Let us go a little farther. On page 69 of *Gleanings* for 1883, he writes, "Mr. Betsinger says, and I agree with him, that if we had the same number of bees in a hive in apple-bloom that we do in basswood bloom, the yield would be as great. I once had 8 pounds stored in one day with not over one-third the bees I have in basswood bloom." Is it not possible with these bees to get a colony up to its full strength in time for apple bloom?—78,000 unhatched bees, with more than twice that number in the wing state; surely they would gather much honey.

Then there is the sycamore bloom just after, which I consider the king of all in honey-producing plants; after which they might be divided for the clover, and divided again for the basswood. Some have 4 enormous colonies for that harvest, instead of one.

Suppose, for argument, that they are so savage as to be unmanageable; have not bee-keepers who keep Italians always some rather weak colo-

nies when spring comes? And does it not strike one to exchange the queens of these, so that these savage bees can be replaced by Italians in time for the honey harvest (for he admits they winter well, and are very strong in the spring), and let the savage lot build up another colony for winter? I think the secret is, they have not been allowed sufficient room to breed in, so as to reach their full strength.

In the third paragraph, he makes an assertion, which, I am afraid, he has never proven by actual fact, but is reasoning from analogy, viz: "That fertile workers kill the young queens."

It is a fact that a large quantity of fertile workers appear in the hives after any attempt at queen-rearing, I might say hosts of them; for I have had 8 square feet of comb, egged in every cell, and some cells had upwards of 6 eggs in them, within 24 hours, with these workers; but the only serious drawback is, that no queen-cell is allowed to hatch out, being destroyed when about 14 days old. I think by reasoning on this fact, he has gotten wrong, or very likely missing the cells and finding no queen, he thinks she was killed as soon as hatched.

I find no difficulty in introducing queens to such, or uniting them with other colonies. I have never known them to kill a queen, but this I have proved; they will live on peaceably and lay their eggs side by side with a laying queen, as I have shown in the *British Bee Journal* for 1883, page 66.

What bee-keeper has not noticed a number of drones in worker cells, when a young queen commenced laying? Why? These have been laid by fertile workers only. I may here remark that some think a young queen ought to begin laying before 10 days after hatching; but this is an error, as the best queens I have had, have been those which longest delayed laying.

I once had a black queen hatched in July, which did not lay until March; and last year I had a Syrian hatched Aug. 9, which did not lay until the end of February; and both of these were fertile. I have several times found the cells filled with the production of fertile workers before the queens commenced to lay; and, no doubt, many a fine queen has been condemned as a drone layer on this account; and many a queen has been thought to have begun laying when only the workers had begun.

I had hoped, during the past summer, to be able to encourage the use of these fertile workers; but the weather spoiled my experiments.

If people will consider that every time a queen of these races is reared in their native colonies, a lot of fertile workers are also reared, and that the queens, whether virgin or mated, are not destroyed by them; or these bees would have been extinct hundreds of years ago; in fact, would be in less than five years. It will be plain that Mr. Doolittle has made a mistake in saying that they are.

As I have hinted that many of the queens doing duty for these Eastern bees, may only be mongrels, and some

may think I mean to advise getting rid of them, but I do not; for no matter how they may be crossed, if they have only the Eastern blood in them, they will pay for keeping, at least until an unquestionably pure one can be afforded, and when one can be got from a source which can be depended upon for getting a genuine Simon-pure, it would be as well to compare the bees from her carefully with those already in the apiary, particularly as to size and disposition to sting when handling them; for peradventure these you have may be pure ones, and it would be a loss to throw them away.

Palestines are better than Italians, but do not come up to the Syrians; while for profit in honey, give me a Syrian queen mated with a black drone; but never attempt to keep these bees unless you are prepared to let them have sufficient breeding space. They ought to have at least 16 Langstroth frames to breed in; though if the Langstroth is used, I should prefer two rows of frames placed over each other for a brood-nest; making it really two stories high; then with a good locality, a good season, and good management, the Carroll record could be outdone in most places, for I see nothing extraordinary in it with these bees. Sheffield, England.

For the American Bee Journal.

### Supers for Surplus Comb Honey.

E. P. CHURCHILL.

I am surprised to see how any one can advise a  $\frac{3}{8}$  inch space between the top of the frames and the section case, unless he has strips to rest on the top-bars; for if there is nothing but the rim to the case, the bees must of a necessity go up only about the edges. I prefer a case to rest at the sides on a chamfered edge thin enough so that the bees can pass from the side of the hive, as they crawl up on the inside combs, which is  $\frac{3}{8}$  of an inch from the side of the hive; and unless the side of the case is beveled down to at least  $\frac{1}{2}$  of an inch, the bees are obliged to leave a passage from the outside comb.

I used them a long time before I discovered this fault. My case is a little like Root's. I use glass only on one side, and a solid  $\frac{3}{8}$  inch wood on the other, and to stiffen the rests under the boxes. I use a partition  $\frac{1}{4}$  inch thick, and the bottom of the ends are  $\frac{1}{2}$  inch thick, and are beveled from  $\frac{1}{2}$  inch at the bottom to 5-16 inch at the top, so that two lengths of  $4\frac{1}{4}$  boxes just fit each side of the partition; thus I can have half a case or a whole one.

I rabbet 3-16 of an inch at the ends, and  $\frac{1}{2}$  of an inch deep for box rests; these are 3-16 of an inch thick, and are nailed to the partition, which makes a stiff, good case, and leaves very little surface to stick to the frames. At each end of the top of the crate is a wedge to tighten the boxes; there is a bee-space of 5-16 of an inch, which is enough for a free

bee-space, and they can reach the sections anywhere on the frames.

I want no more cases the full width of the hive, especially where 10-frame hives are used; but I do want a 10-frame hive for many reasons. One very important thing is to have no air-space between the two stories, as it is sure to drive the bees away from the sections. One will say it is too expensive to make a hive air-tight; but it can be made so, simply by painting the edge of the upper story and tacking on firmly 1 or 2 thicknesses of woolen cloth. I want a narrow rim around the upper story to shut down  $\frac{3}{8}$  inch over the lower story; then, with the cloth, the bees take to the outside boxes far more readily. On the case, I prefer a cushion made of leaves; for I know by experience that it is cooler on a hot day and warmer on a cool night; in short, it is a very good regulator.

I find that where no cushion is used, bees do double the gumming about the sections, especially at the sides and top next to the cloth; because nature tells them it is too cold. The hive should have not only heat but moisture to a certain extent; and a cushion supplies both.

The best cover for a hive is roofing with ventilator at each end close to the roof. Strips are tacked on the inside along under the roof, 1 inch or more down, and 5 or 6 inches wide. Burlap is tacked all around inside of the cover, but in one end in which I pack hay or excelsior; finally fastening the open end. This gives a circulation of air, and affords shade; and when a cloth is spread on the frames or cases, in the upper story, neatly tucked down (with a cushion below in winter), I have a perfect bee-home, and on a hot day the bees are far more comfortable.

The question of getting bees into the boxes is one of much importance. I have tried many ways, and will describe the one which I consider the best. I aim at early breeding, so as to have a good force about apple-bloom. I even up all colonies, so as to have a strong force from all; and it can be done in no way but by early feeding and proper care.

I add frames as needed till I have 9 Langstroth size. These I spread so as to fill the hive and let the bees build and fill out the combs just as much as possible; and as there are 9 instead of 10 frames, there is room for a lot of bees that are not really needed, but yet are just what I want at surplus time.

When honey comes in freely, and the frames are bulged and crowded, I shake off the bees and shave the honey off even with the frames, and place the ones with the least brood in the centre of the hive. I set first one  $\frac{3}{8}$  inch frame from the side of the hive, and the others only  $\frac{1}{2}$  inch from this, and so on to the ninth, which is within  $\frac{3}{8}$  of the  $\frac{1}{2}$  inch division-board. I now put on a case with the beveled edge over the first frame close to the side of the upper story. This case is one box narrower than the inside of the hive, which covers the 9 frames; but instead of a full case, I take out

half the boxes and fill the space with cloth, etc., and set the case with the boxes at the back part of the hive, covered with enameled cloth and cushion.

I add twice as much water as honey to the honey shavings, and mash all together and strain through a cloth; this I set on the section case in a feeder, and apply the same covering.

Now, as the frames are closed up, and as the honey is above the sections, the bees are encouraged to take to them. I reduce the honey as it obliges the bees to provide a place for it. As soon as the honey is all taken down, remove the feeder, replace the packing, and when the boxes are fairly started, one row is set forward, and a row of boxes with foundation put in its place. I do not alternate one of started and one of raw foundation; for the started ones are almost sure to be bulged into the new ones; but with a whole row it is all the same.

We have room for one more set of boxes, which may, in time, be given; and as more bees are hatching, raise this case and set another with foundation, under; following up and removing as fast as they are finished. Some one may say, why use so few boxes. If he has measured a 28 one-pound case, he will see that to fill one requires 16 quarts. Where is the colony to do this, which will rear a large number of workers and leave wax-workers and nurses in the hive?

Add the large crate to an open, airy hive, and we may easily account for poor box work. If they show signs of swarming, take a frame of brood and bees from a number of hives, and give them a laying queen; carry them away 2 miles, and in a short time there will be a good colony. Of course I replace with a frame of comb or foundation.

We must keep in mind that shade of some sort is indispensable; and evergreens are good and last some little time if only set in a can of water deep in the ground.

I believe much spring dwindling can be avoided by handling the bees at the proper time. While we are feeding in cold and chilly weather, the bees will get excited, and it is natural for a bee to load up and fly out, even if only a few feet from the hive, and return. However, if we manipulate, feed, etc., about dark, much of the excitement is avoided, both by the feed and handling. Clear honey is the worst thing to excite them. Bees suffer for water, and after much thought, I have invented a feeder, waterer and passage way over the frames, all in one. I changed a colony of Italians into a clean, dry hive, and they showed some uneasiness. I put on the feeder (which covers the length of the frames), and in one apartment I gave syrup, and the next close by I gave water with a bit of salt in it; and immediately they quieted down.

This arrangement is so made that the bees cannot get drowned or fly out; yet we can see them, and it does not shut off ventilation. It can and should remain on the hive all through

cold weather, for a passage way if for nothing more. For shipping bees it has no equal; by opening it and packing the feed boxes with moss and inverting on the frames, the moss being wet, the bees have a perfect life preserver.

North Auburn, Maine.

For the American Bee Journal.

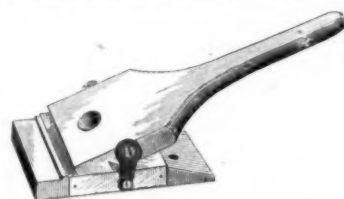
### Improved Foundation Fastener.

W. H. SHIRLEY.

After experimenting with several methods of fastening foundation, I find that the Parker foundation fastener does the best work. On account of its sliding motion, I could rely upon doing a good job.

After using it a while, and putting the lubricants on the fastener with a knife, I decided that that was too dauby and slow; so I have improved it, as will be seen in the accompanying engravings, and have sent one to be placed in the BEE JOURNAL museum.

The improvement consists of a tin cup, made to put on the bottom piece of the fastener, which holds the lubricants. To use it when the top piece is back, lift up on it, and that forces the front end down into the cup, and you are ready to go ahead. To prevent the lubricants from running down the underside of the top-piece, cut a little notch in the underside of the top-piece, as seen in the engraving.



Any one who desires to improve the Parker fastener thus, can have any tinsmith make one at a cost of about 10 cents; and when put on and used, it will save time and daubing, and work like a charm.



Our plan, last year, was to cut a cup into the bottom piece of the fastener. This necessitates the use of a larger size fastener than the sections. This plan, I think, would pay any man who had 500 sections to fill with foundation. It was too costly for those who already had the Parker fastener; for all know it is very difficult to make people see a good thing when it affects the pocket-book.

Glenwood, Mich.

[The fastener is placed in the Museum for the inspection of visitors.—Ed.]

Read at the N. E. Michigan Convention.

### How to Begin Bee-Keeping.

R. L. TAYLOR.

[The following is the President's address, delivered at the Northeastern Michigan Convention at Lapeer, March 5, 1884, as mentioned on page 282.—ED.]

1. The first and one of the most important questions which one proposing to enter upon the business of bee-keeping is: Am I fitted for it by nature? Unless one has a genuine love for the business, and can keep alive some degree of enthusiasm, I doubt if he can attain real success. Though the fear of stings seems to the tyro a very formidable difficulty, it is really the least of all; a taste for apiculture will speedily overcome it. If one has, in addition to this quality, promptness, industry and practical energy in attention to details, with a determination to persistently labor to overcome difficulties, and never to yield to discouragements, he may well hope for fair success.

2. The first thing to be observed in deciding upon the territory to be occupied by an apiary, is that a country already stocked with bees must not be entered. To do so means a blasting of the hope of success at the outset. Then, the greatest care must be taken to occupy a place well supplied with all the honey plants necessary to make as complete a succession as possible, from early spring to the frosts of autumn; and especially should I insist upon an abundance of all those which are the source, generally, of the surplus crop, which are in this part of the State raspberry, white clover, basswood, and fall flowers.

3. The apiary should be placed upon a plat of ground which cannot by any possibility be flooded at any time of the year, and which has sufficient natural drainage to enable it to absorb quickly what little water remains upon it after a rain. It should, I think, be level, clean, smooth, and covered with a greensward kept closely mown, except where the hives are to stand, where some preparation to wholly prevent the growth of vegetation would be well, particularly about the entrance of the hive, which should also be so fixed that heavily laden and partially chilled bees that fall to the ground before reaching the entrance, can readily regain the hive without again taking wing. The hives are to be so disposed as not to hinder the work of the apiary, and so as to aid the bees in distinguishing, and so in finding their own honey. I prefer some shade, if it be not dense; for no shade at all is better than such as would create or retain dampness. A wind-break on the north and west is desirable, and should be early provided.

4. Before obtaining bees, determine satisfactorily to yourself the hive to be used, and that depends largely upon the size of the frame preferred. It is very desirable to use a frame exactly of the same size, as that mostly in use among those with whom you are likely to have dealings, either by

way of buying, or of selling. Colonies upon frames, such as the purchaser desires to use, are worth more to him by a large percentage, than are those upon frames different in dimensions. Perhaps there is nothing about which the beginner is so likely to be careless as in this matter of looking to the size of frames in the hive he procures; and for the amount invested in it, there is nothing so important. The Langstroth frame so-called, which is  $9\frac{1}{2}$  inches by  $17\frac{1}{2}$  inches is, I believe, in more general use than any other, and I advise its selection always. It may not be better than any other, but all things considered, I think it is at least the equal of any. For one who for any reason wishes a shorter, deeper, and somewhat lighter frame, the American or the Gallup is the alternative. When once a frame is selected, adhere to it unflinchingly.

5. The hive itself should be a plain box without top or bottom. In depth  $\frac{3}{4}$  inch greater than the depth of the frame selected. One of the other dimensions must be  $\frac{3}{4}$  inch greater inside measure, than the length of the frame; and the remaining dimensions must be graduated to accommodate the number of frames desired, allowing about 17-16 inches for each frame. There must be a rabbet cut at the top of the ends, or of the sides, as the frame requires, upon which the arms of the frame are to rest; the rabbet must be just deep enough so that when the frame is put in position, the space above and the space below the frame are just equal. Some prefer tin rabbets; but I doubt whether their advantages balance the outlay. The cover should be a plain board simply cleated at the ends. The bottom-board is to be 4 inches longer than the hive, fastened to two pieces about 2 inches square; out of the upper side at the front end should be cut a triangular piece  $\frac{3}{8}$  inch thick. Two of the angles of the triangular piece are at the front corners of the bottom-board, and the third angle should be about 5 inches back of the middle of the front end of the board. With a circular saw this can easily be taken out. When this is taken out, the space left becomes the entrance to the hive, and this entrance may be enlarged or diminished, or entirely closed by simply moving the hive forward or backward. The hive on the outside, and the cover upon both sides, should, of course, be thoroughly painted with two coats of the best white paint. I should have said, that after the sides and ends of the hive are cut, each piece should have a hand-hole cut into it with a wabbled saw, for convenience in handling. For a second story, if it were desired to produce extracted honey, I should use a body precisely like that of the lower story, with a flat honey-board between the two; preferring the use of the honey-board to the disadvantage of having bodies of two styles. For comb honey use the Heddon case. A sufficient amount of foundation should be had for use in the building of all the comb, and that for brood-frames and extracting should be put upon wires.

6. It must be remembered that what I am saying is for those who have never handled bees; particularly when I say that the bees to be procured should be the Italian, on account of their peaceable character; for this quality will enable the beginner the sooner to divest himself of all fear when handling bees; and the number of colonies should be no more than 2 or 3. A good work on apiculture, and one or more of the bee-periodicals, which should have been already obtained and well studied, should now be kept in constant requisition. These colonies, and largely the time of the learner, should now be given to investigation, practice and experiment. The incense of the smoker, which should of course be provided, should seldom fail to arise on the incoming of every warm day.

The object the first year should be to obtain practice, and a good degree of familiarity with bees, and with the various manipulations employed in their management. How to rear queens? How to divide colonies? How to hive swarms? Can a colony that has begun to prepare for swarming be induced to yield that disposition successfully? are only a few of the many points that should be studied and experimented upon remorselessly.

Let the beginner sacrifice his colonies, if need be, in order to become thoroughly grounded by practical experience, in as many as possible of the underlying principles of successful apiculture. I could not have gone into details and thus filled out the outline I have drawn, without trespassing on your time; nor can I take your time to touch on other matters of interest and consequence, but will leave the subject here, believing that the above suggestions followed out with a thoroughness which is begotten of genuine interest, will fit the beginner to care for an apiary of a moderate number of colonies, with satisfaction and success.

Lapeer, Mich.

For the American Bee Journal.

### Students in Apiculture.

DORA HYDE.

If bee-keeping is a science and to be learned by an apprenticeship, it seems to me there ought to be some uniform system agreed upon by the teachers for the students. Now, there are as many "terms to students," as there are bee-keepers who teach, or propose to teach bee-keeping.

We understand an apicultural school somewhat on the plan of the "Business Colleges," was discussed by some of our leading bee-men last summer; but no terms could be agreed upon. The exact nature of the school I did not learn, but I have been informed that it was to have had a teacher or "professor," who would give instructions in the theory in general, and another, a practical honey-producer, who would furnish a few colonies, hives, sample fixtures, etc., and give a short practical illus-

tration of his method each day during a term of five months.

The school was given up, because one of its projectors now receives students and teaches them practically in his shop and apiary, and in a manner which he considers far superior to any school where theory alone is taught.

I was lately talking with a gentleman who had spent several weeks with each of four different parties, who take annually from 4 to 20 students; and his opinion was that some of those who propose to teach the business, seek in this way to get cheap labor only, and give as little attention as possible to the instruction of the students; giving some of the students work in the apiary, and others work in the shop, or, perhaps, even in the office at matter entirely disconnected with apiculture.

As a matter of business, this may be a good method; but the other side has rights which, in common justice, we should consider. The moment we accept the application of a student, and he places himself under our instruction, it is our duty to him, to our profession, and to ourselves, that he is directed each day where to look for instruction. If he is not already familiar with the operations of the apiary, and has not learned just what he needs to know, and where and when to find it, he will be just as liable to spend the most important part of the season in the shop, "driving sections," as out in the apiary, learning to handle swarms. The fact that he has placed himself under instruction is evidence of his ignorance of the business, and our accepting, him as a student binds us as an honest teacher to instruct him in all the branches of the business, to the best of our ability. The selection of those who already know the most about the business to do the work in the apiary, and sending others who have some mechanical skill, to the shop, is an injustice to both classes.

We believe that young men who can spare the time, and who wish to engage in apiculture as a vocation, cannot do better than to spend a season with an experienced apiarist. We would advise them, however, to be sure they find one who will instruct them in all the details of the business, at a fair price for such instruction, rather than to give their time and labor for the crumbs that may accidentally fall in their way.

Cleveland, Ohio.

Read at the N. E. Michigan Convention.

#### Cane Sugar for Winter Stores.

W. Z. HUTCHINSON.

In so many instances have bees died under circumstances in which the cause of their death could scarcely be attributed to anything except the improper quality of their food; diarrhoea has occurred under so many apparently conflicting conditions, and these apparent contradictions could only be explained upon the hypothesis

that the food was of an unsuitable character; and in so many instances has the superiority of sugar stores been demonstrated, that, three years ago I began to experiment by extracting the honey, in the fall, from the combs of a few colonies, and feeding the bees a syrup made from granulated sugar. Some of the sugar-fed colonies were left out-of-doors, some placed in the cellar, and others buried in a "clamp."

The first winter all came through alike. The honey of that season and locality was exactly as good for winter stores as was sugar. The same experiments were repeated the next season with marked results in favor of the sugar. The only colonies wintered in the open-air that lived until spring, were those having sugar stores. All of the colonies in the cellar, not having sugar for food, suffered from dysentery, and  $\frac{2}{3}$  of them died; while those having sugar stores showed no symptoms of dysentery, and were dry, sweet, and clean, even the bottom-boards not being covered with dead bees. The bees in the "clamp" had wintered much the best; 15 per cent. of those with natural stores had died from diarrhoea, and most of the remainder, except those with sugar stores, had suffered more or less by the same disease.

Last fall I removed all the honey from about 20 colonies, and fed them sugar. About 50 colonies were each fed from 5 to 15 pounds of sugar. I theorized as follows: The bees will store the sugar in the empty cells in the centre of the hive, where they will be most likely to cluster in the winter; while the honey that is in the upper part and corners of the combs will not be consumed until spring, when frequent flights will prevent diarrhoea. About 15 colonies were left with natural stores.

If the 57 colonies in the clamp are in the same condition as the 13 in the cellar, they are in fair order. Fifteen colonies were left out-of-doors; 10 of them packed with chaff and sawdust in large boxes, while 5 were left with but slight protection.

I have about decided that bees require protection of some kind. I have, for several winters, left a few colonies unprotected; but in only one winter, and that was a warm one, have they wintered so well as those that were protected.

So far this winter I have lost 2 colonies, and they were from among the 5 that were unprotected. Each had been fed about 12 pounds of sugar, and the remainder of their stores, about 8 pounds each, was honey. One of them starved to death. It was not a very strong colony, and the continued, exceedingly cold weather prevented the bees from moving along in quest of food. There was not the slightest sign of diarrhoea; but the other colony died of it, and for awhile I was puzzled; but, at length, I remembered that this was the only colony in which the bees had clustered upon the upper part of the combs, and, consequently, they had fed upon natural stores.

Rogersville, Mich.

Read at the N. E. Michigan Convention.

#### Production of Comb Honey.

L. C. WHITING.

The first point aimed at is to have the colonies strong in numbers and in the right condition to spare the field-bees to do their work. I have seen no plan that suits me better than the one recommended by Mr. Doolittle, which can be found in the bee papers of last year.

Have your racks and sections ready to be put on as soon as the flow of honey commences. Have, if possible, a few sections in each rack that are partly built out. These can be obtained by placing frames of sections filled with foundation in the brood-nest of strong colonies when fruit trees are in bloom, removing them as soon as they are well drawn out.

Place them in your honey racks to be ready for the main crop. Put the sections over the brood-nest as soon as you see a streak of white, new wax being added to the top of the brood frames between the combs. Then open the hive and reduce the size of the brood-chambers with a division-board to the capacity of the colony, or enough to crowd the bees into the sections. If it is a small or weak colony, put a frame of sections in the brood-chamber behind the main part of the brood, and keep one frame of open brood behind the frame of sections, changing this frame to the centre of the brood-nest as soon as capped over; never allowing the bees to hatch out behind the sections, but keep this space filled with eggs or open brood.

Should the bees swarm from a strong colony, place the swarm on the old stand, and give the rack of sections from the old hive. The swarm should have at first as few frames as they will cluster upon, so as to force a large portion of the bees into the sections, giving new frames as fast as those in the hive are filled with eggs.

Give the parent colony a frame or two of sections to draw out in the brood-nest, and when the queen is hatched, give them brood or bees enough to make a good colony, or double up with other colonies. Always keep the brood-nest crowded with bees, and you can have the honey stored when you want it.

Every colony can be made to gather its share of comb whether it is a nucleus with one comb, or a large one with 8 or 10 frames.

The wide frame I use has no top-bar, which enables me to take out the partly filled sections and replace with empty ones with little labor.

All sections should be finished over the brood-chamber and removed as soon as well sealed. If a colony is strong enough to work in the sections and does not, transfer a few sections, bees and all, from other colonies, and uncap some of the honey in the centre of the brood-nest. Full combs of honey can have the caps broken and placed in the centre of the brood-nest one at a time, and if conditions are favorable, it will be mostly taken up

into the sections. Reversible combs should be turned over whenever there is too much honey between the brood and the sections, and especially a few days before the close of a honey flow.

Always keep the brood-nest within the capacity of the queen. Handle the frames often, as it induces the bees to feed the queen, and she will lay the more. All caps and racks should be made strong, and so arranged that separators can be used or not, at the pleasure of the operator. The most profitable time to put in separators is after the bees are well at work in the sections and before the combs are built out too far. Look over the sections often in the early part of the season, and put in place any combs that are not straight, or as you wish them. It will save much disappointment when you harvest the crop. Use comb foundation for starters in all cases, and have at least half-inch openings between the sections. No more room should be given in the sections than the bees can keep warm, or they will waste much wax.

East Saginaw, Mich.

Read at the N. E. Michigan Convention.

### The Best Strain of Bees.

M. D. YORK.

The Italian bee is greatly magnified by many; even people who know nothing about the honey bee, have come to think that if one is keeping Italians, he is sure of success.

After studying their character closely for the past five years, I find that the queens are very prolific, more so than the blacks, and produce a larger amount of bees. This trait is all right for some purposes. I once thought a large amount of bees in a hive, and a prolific young Italian queen meant lots of honey; but I have found this to be a mistake. I generally get the best results in comb honey from those which are less prolific; and, consequently, less inclined to swarm.

I said this trait of prolificness is all right for some purposes. It answers well if one is working the business of rearing bees to sell; and also for the one who is just commencing in the business; and calculates his success by the number of swarms he can get from one colony. This is all right, if he could only stop when he wishes to, or rather when he has all the bees he wants, and desires to work for honey; but he is very much disappointed to find that they keep right on swarming, regardless of his wishes, and he has to let them spend their swarming energy in building brood-combs instead of storing surplus honey.

Again, it is all right if we wish to work for extracted honey, for the extractor is, without doubt, the best non-swarming apparatus ever invented; but I cannot yet believe that extracted honey ever will take the lead in our markets.

I can work the blacks with  $\frac{1}{4}$  more bees in the hive, for comb honey, than I can the Italians or hybrids, with far less danger of their swarm-

ing. This swarming mania can be controlled to a certain extent, we all know; but I would rather have one colony to work for comb honey that swarms naturally the forepart of June, and then is satisfied, than two that you have to keep taking brood from, or swarm them artificially.

I was very much pleased to see how emphatically Mr. Hutchinson came out in his article in *Gleanings*, in favor of natural swarming; but I was very much surprised when he also came out in favor of the hybrids. Although Mr. H. is one of our most successful queen breeders, it is his first year's work for comb honey; and now Mr. H. should next season try some pure blacks for comb honey, and report.

Now, to sum up the whole matter, if it is desired to produce comb honey, the common black or brown bee is the best, in my opinion. It is the general verdict of those who have produced both comb and extracted honey, that the comb honey finds the most ready sale. I claim that the producer of comb honey from Italians, or their crosses, cannot compete in the same market, at the same time, with the one whose honey is produced by blacks. The honey of the former is not so nicely sealed, which gives it a darker and rougher appearance. I have never been able, as a rule, to get them to fill out their combs so nice and smooth next to the wood as do the blacks.

It is my opinion that the black bee will be much sought after in the near future; and I think there is nothing gained in crossing them with the Italians, unless making them more cross and vicious to handle is an advantage.

Millington, Mich.

For the American Bee Journal.

### Wabash County, Ind., Convention.

The bee-keepers of Wabash County met at the Court House in Wabash, Ind., on April 11, for the purpose of organizing a bee-keepers' association.

Mr. A. Singer was chosen chairman, and Mr. H. Cripe, Secretary *pro tem*, of the meeting. The chairman then explained the object for which they had met; after which a committee was appointed to prepare a constitution and by-laws. Adjourned till 1 p. m.

At 1 p. m. the chairman called the meeting to order, and the committee on constitution and by-laws reported, which report was unanimously adopted, after changing the membership fee from 50 cents to 25 cents. Eleven names were then enrolled.

The election of officers was next in order, and resulted as follows: Mr. Aaron Singer, President; Mr. J. C. Zimmerman, Vice-President; Mr. H. Cripe, Secretary, and Mr. G. D. Lowman, Treasurer.

Two hundred fifty-six colonies of bees were represented by the members. After some discussion the convention adjourned to meet at the same place Oct. 5, 1884.

H. CRIPLE, Sec.

AARON SINGER, Pres.

For the American Bee Journal.

### Improved Bees—Comb Foundation.

JAMES HEDDON.

In reply to Mr. Doolittle's question on page 260, top of third column, let me say that I have several times in this JOURNAL, stated my objections to such complications as he, in that article, describes; and why I consider the shallow-chamber indispensable. I now refer him to page 637, for 1883, to quotations from Mr. Langstroth.

Mr. D.'s attack upon the efforts to improve bee stock is very well answered by two articles on pages 278 and 280. I wish to present just one among many refutations to his article against that greatest boon to scientific apiculture—comb foundation. Formerly, from 8 to 12 days of the best of the honey harvest was granted to a colony to get the brood-chamber ready for surplus boxes. Now, we give them just 48 hours to accomplish the same, and they do it in very much better shape. About 2 to 3 tons of fine wire are now used annually; and actual experiment has led to this wholesale use. Please let me be remembered as one who plead for the shallow-chamber between the brood and surplus apartments, and full sheets of comb foundation above and below, with wax and honey at present prices.

Owing to the backward spring, I think it better to postpone my report on wintering until about May 15. My bees are not yet out of the winter packing; they are in excellent condition as a whole. My past winter's loss is small for this county.

Dowagiac, Mich.

For the American Bee Journal.

### Western Michigan Association.

According to appointment, the bee-keepers of western Michigan met at Berlin, on April 24. In the absence of the President, Vice-President Thos. M. Cobb, called the meeting to order.

The minutes of the previous meeting, and the Treasurer's report being called for, were read and adopted. The election of officers then took place, resulting as follows: For President, Thos. M. Cobb, of Grand Rapids; for Secretary and Treasurer, Geo. E. Hilton, of Fremont Centre; for Vice-Presidents, Ottawa Co., Jno. Slabbekoorn; Kent Co., Lewis Woodman; Muskegon Co., G. C. Young.

It was decided to annex the counties of Oceana and Newaygo; their Vice-Presidents to be appointed by the Secretary. By request of the Secretary, it was also decided to hold the annual meeting at Fremont, on the last Tuesday in November next.

Topics relating to bee-culture were then discussed by all the members. Colonies represented were, fall 480, spring, 441. Only 58 colonies being wintered in cellars. Although the meeting was small, much interest was manifested by all. Adjourned.

F. S. COVEY, Sec.

THOS. M. COBB, Pres.

**Local Convention Directory.**1884. *Time and place of Meeting.*

- May 13.—Cortland Union, at Cortland, N. Y.  
M. E. Darby, Sec.
- May 15.—Tuscarawas Co. O., at Port Washington, O.  
A. A. Fradenburg.
- May 16.—N. E. Kansas, at Hiawatha, Kans.  
L. C. Clark, Sec.
- May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.  
Jonathan Stewart, Sec.
- May 26.—Will County, at Monee, Ill.  
P. P. Nelson, Sec.
- Oct. 11, 12.—Northern Mich., at Alma, Mich.  
F. A. Palmer, Sec., McBride, Mich.
- Oct. 15, 16.—Northwestern, at Chicago, Ill.  
W. Z. Hutchinson, Sec.
- Dec. 10, 11.—Michigan State, at Lansing.  
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

**What and How.**

ANSWERS BY

*James Heddon, Dowagiac, Mich.***Essentials in Queens.**

On page 234, Mr. Heddon, in reply to "Tommy Dodd," says: "Not one-half of the queen-cells usually built, would please me from which to rear a first-class queen."

1. What does Mr. H. call a first-class queen-cell?

2. What standard point does he require in a virgin queen to prove satisfactory?

3. After being fertilized, will she always prove a regular layer, or deposit her eggs in proper order?

JOSEPH M. WISMER.

Jordan Station, Ont.

ANSWERS.—1. There is no way to decide regarding cells, that I can readily describe here.

2. Virgin queens are too young to test for qualities.

3. Not always; but she will, as a rule, if nothing unnatural happens to her.

**Italianizing, etc.**

1. I have one colony of bees on a box-hive that is very strong; turn the hive up when I will, warm or cold, every inch of space in the hive seems to be crowded with bees. The combs are full of brood to the very bottom. There are no queen-cells that I can see, but there are lots of drones hatched and flying. Will they throw off a swarm soon, or what is the best to do with them? I have set the hive on top of a Langstroth hive, next to the frames full of comb and honey.

2. How can I tell worker combs from store combs?

3. How is the surest and best way to tell when robbing is commencing?

4. What time of the season is the best to introduce young (not virgin) queens to Italianize black bees?

I had a lively time with robbing one day. I carried some into the cellar; covered others with blankets;

and closed the entrance to all the weakest colonies. I did not get control of them until I closed up my strong colony. Then they stopped in a few minutes. DAVE H. LISLE.

Chebanse, Ill.

ANSWERS.—1. You must either give them surplus room above, artificially swarm them, or wait for natural swarms.

2. Worker comb has about 5 cells to the inch; store or drone comb about 4.

3. By the actions of the bees trying to enter the hive, robbers appear in a suspicious manner flying to-and-fro, alighting cautiously, and often arising instantly, re-alighting, repeating this several times before entering the hive. If the robbed colony is protecting itself, you will see the bees clinched and fighting.

4. June and July usually.

**Bees and Peaches.**

I live just across the road from a peach orchard of about 20 acres, and there are many others near.

1. Would it be wise or otherwise to attempt bee-keeping as a specialty in my location?

2. Would the sour juice from rotten and broken peaches injure the honey, or cause the death of colonies in wintering?

3. We do not know whether the bees would gather the juice or not; but if they should, would it injure the surplus honey? JAMES SMITH.

Willoughby, Ohio.

ANSWERS.—1. The peach orchard will be no objection.

2. I had my whole apiary once store large quantities of cider in each hive. They wintered tip-top all the same.

3. I think you need have no fears of any juice injuring the surplus honey.

**Pollen in Abundance.**

We are having a perfect avalanche of pollen; almost half filling some of the hives, and still it is coming in rapidly from soft maples, and daledions to come yet. 1. Will not so much pollen prove to be a nuisance filling the combs so that brood cannot be reared? Bees are breeding finely now, and have wintered well. 2. Can the Langstroth hive be used without honey-board, and not have the queen bother by getting into the sections? Hillsdale, Mich. W. B. DRESSER.

ANSWERS.—1. You need have no fears regarding clogging the combs with pollen at this time of the year.

2. Yes.

The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884. JONATHAN STEWART, Sec.

There will be a meeting of the Northeastern Kansas Bee-Keepers' Association, at Hiawatha, Brown Co., on May 16, 1884. A general attendance of bee-keepers is expected.

Granada, Kan. L. C. CLARK, Sec.

The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, Sec.

The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers' association. All are earnestly invited to attend.

A. A. FRADENBURG.

The Cortland Union Bee-Keepers' Association, will hold their spring meeting May 13, 1884, at Cortland, N. Y. M. G. DARBY, Sec.

**Honey and Beeswax Market.**

OFFICE OF THE AMERICAN BEE JOURNAL.  
Monday, 10 a. m., May 5, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

**CINCINNATI.**

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

**NEW YORK.**

HONEY—White clover and basswood in 1 and 2 lb. sections, 14@16c. Dark and second quality, 13@14c; extracted white clover in kegs and barrels, 8@9c.

BEESWAX—Prime yellow, 34@35c.

THURBER, WHYLAND &amp; CO.

**BOSTON.**

HONEY—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE &amp; RIPLEY, 57 Chatham Street.

**CHICAGO.**

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

**SAN FRANCISCO.**

HONEY—Only in a small jobbing way is there anything doing. Market is easy at the quotations, holders being anxious to close out stocks. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@.

BEESWAX—Wholesale, 27@30c.

STEARNS &amp; SMITH, 423 Front Street.

**KANSAS CITY.**

HONEY—Demand good for this time of the year. Prices unchanged. Choice comb, 2 lb. sections, 15@16c; 1 lb. sections, none in market; dark and irregular, 10@12@c. Extracted, in better demand for dark honey at 7@8c; white dull at 8@9c. I could sell a few thousand pounds of dark honey very readily at above figures. Stocks are low.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

**ST. LOUIS.**

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6@c.

BEESWAX—Firm at 32@32@c. for choice.

W. T. ANDERSON &amp; CO., 104 N. 3d Street.

**CLEVELAND.**

HONEY—Market continues very fair, particularly for choice 1 lb. sections, which are in good demand at 18c; 2 lbs. do not sell so readily, but in the absence of 1 lbs. it moves at 17c. Second quality is very slow at 14@15c, and extracted not wanted at all in any shape.

BEESWAX—Very scarce; would bring 35 cts. on arrival for choice yellow.

A. C. KENDEL, 115 Ontario Street.

**SAN FRANCISCO.**

HONEY—We quote comb honey in 2 lb. sections, 17@18c; extracted, 7@8@c.

GEO. W. MEAD &amp; CO., 213 Market St.

## Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

**Subscription Credits.**—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a continual statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

## GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar they send direct to this office, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an additional present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

## Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages).....\$1 00  
 " 100 colonies (220 pages)..... 1 25  
 " 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for \$3, or in paper covers for \$2.75. The Monthly BEE JOURNAL and the book, \$1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is \$1.50 bound in paper covers, or \$2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

## Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price still lower, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

## SOMETHING NEW!

Sent to

E. B. WEED, No. 95 W. 2d St.,  
 CINCINNATI, OHIO,

For a sample of

## FOUNDATION

that cannot sag or break down, with side-walls of Pure Wax, from one-sixteenth to one-fourth of an inch high.

Cheaper than any other make.

## HEAD-QUARTERS

IN THE WEST

For Apian Supplies of every description. Send for 1884 Price List before purchasing elsewhere.

BRIGHT BROTHERS,

10C1f MAZEPPA, Wabasha Co. MINN.

## Imported Italian Queens.

We made an arrangement to get them from the best location in Italy, while we were there a few months ago. Orders solicited.

19A2f MUCCI & BRO, LEXINGTON, KY.

## MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,

1C1f 12B1f DUNDEE, Kane Co., ILL.

## THE BRITISH BEE JOURNAL AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. Rev. H. K. PEEL, Editor. We send the Weekly AMERICAN BEE JOURNAL and the British Bee Journal, both for \$3.50 a year.

## Bees! Queens! Nuclei!

### INSTRUCTION IN BEE-KEEPING.

**BEES.**—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallip Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, \$3.00; 10 or more colonies, \$2.50 each.

**QUEENS.**—I breed Queens by the best methods, and from the best stock. Queens ready after May 20th. Untested, \$1.00; tested, \$2.00; selected tested, \$3.00.

**NUCLEI,** with untested Queen, \$3.50; with tested Queen, \$4.50; with selected tested Queen, \$5.50.

**INSTRUCTION.**—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of Information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**

10Dt

IOWA CITY, IOWA.

## BEE HIVES!

Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

MILLER BROS.,

51Dt NAPPANEE, Elkhart County, IND.

## Syrian & Italian Queens

Syrian Queens bred from Queens imported from Mount Lebanon. Italians bred from best imported and selected home-bred. Tested Queens of either race before June, \$3.00 each; in June, \$2.50; after June, \$2.00. Untested before June, single Queen, \$1.25; 6 or more, \$1.00 each; after June, single Queen, \$1.00; 6 for \$5.50; 12 for \$10.00, or "Cook's Manual of the Apiary," cloth only 90 cents with order for Queens.

I. R. GOOD,

14Dt 4B3t SPARTA, TENN.

**I. X. L.** Extractors, \$7 to \$10. Cold Blast Smokers, mail free, \$1.00. Plymouth Rock Eggs, \$1.50 per sitting. Circular free. **W. C. R. KEMP,**

14Dt

ORLEANS, IND.

## COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.

**PAUL SPOERKE, Fond du Lac, Wis.**

14Dt

**HEDDON HONEY CASE,**  
Ready to mail, per 100, \$15.00. Hives cheap and good. **N. E. DOANE,**

8Dt

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## SMITH & SMITH

Want to give away 5,000 of their Illustrated Catalogue and Price List of Bee-keepers' Supplies. Special Attention given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.

SMITH &amp; SMITH,

6Dt

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## Pure Italian Bees and Queens!

Send for Price List to

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7Dt

**WAX** Worked on Given Press by the lb., 15c. a lb.; for 4 to 6 ft. to lb., 15c. a lb.; for 6 to 8 ft. to lb., on shares for 2-5. 1 cent a lb. for cleaning, 10 per cent. off on 50 lbs., 20 per cent. off on 100 lbs. or more; 33c. a lb. I pay for clean yellow wax. In sending wax, prepay freight, or express. Cash required when foundation is finished. **A. J. NORRIS, Cedar Falls, Iowa.**

10C3t

## FOR SALE!

Alsike Clover Seed—Early Ohio, Clark's No. 1, and Hall's Early Peachblow Potatoes, Comb Foundation and Bees. Beeswax wanted. Address, **E. S. HILDEMAN,**

14Dt

ASHIPPUN, Dodge County, WIS.

## NEW INVENTION.

Patented Oct. 17, 1882.

Bees forced to leave their surplus honey before removing it from the hive. Saves valuable time and labor; prevents robbing, and the liability of being stung. The Bees are first cut off from the brood hive, by closing the openings in a slat honey board; the conductor is then placed in position, which connects bees in surplus honey with brood hive. They soon find that they are imprisoned, and being anxious to escape, pass out through the Conductor into the brood hive. It also prevents their return.

Conductor and Langstroth hive complete.....\$6 00  
Conductor and Honey Board, any size, and Sections to fill, which shows all the improvements.....1 50  
Conductor, by mail.....50

Send for Circular giving full particulars.

JOHN W. SILCOTT,

14Dt SNICKERSVILLE, VA.

## HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. Send for my Illustrated Catalogue.

5Ct PAUL L. VIALON, Bayou Goula, La.

## ITALIAN BEES AND QUEENS.

Send for Price List to

10Dt D. B. BROWN, DES MOINES, IOWA.

SEND YOUR NAME AND ADDRESS FOR MY 20-page Price List of Italian, Cyprian and Holy Land Colonies, Nuclei, Queens and Apiarian Supplies. H. H. BROWN, Light Street, Col. Co. Pa. 12Dt 4B1t

## The Bee-keepers' Guide;

Or, MANUAL OF THE APIARY.

10,000 SOLD SINCE 1876.

11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the world. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

**A. J. COOK, Author and Publisher,**  
47Dt 18Ct LANSING, MICH.

## Bees For Sale!

Thirty colonies at \$5.00 each, in lower Langstroth hives, in order on cars.

9Dt Dr. WM. M. ROGERS, Shelbyville, y.

## "BOSS" ONE-PIECE SECTIONS.



We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially SUPPLY DEALERS, to

## ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK &amp; CO.,

49Ct Watertown, Wis., Dec. 1, 1883.

1884.

## 6 Warranted Queens for \$5.

Write for Circular. **J. T. WILSON,**  
18Ct MORTONSVILLE, KY.

## Bee Hives AND SECTIONS.

### NEW SHOP AND NEW MACHINERY!!

The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a CAR-LOAD of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is very important you should have our new List before ordering, as prices are arranged differently from last season.

G. B. LEWIS,

18Ct

WATERTOWN, WIS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A LARGE STOCK OF

## Italian and Albino Bees FOR SALE.

We are now booking orders for Full Colonies, Nuclei Colonies and Queens of our new strains, which gave such excellent satisfaction the past season. We also offer Comb Foundation and general Apiarian Supplies. Send for our Catalogue and read what our customers say of our goods. Address,

WM. W. CARY &amp; SON, Colerain, Mass.

18Ct State where you saw this. SA21 10Ct

Friends, if you are in any way interested in

## BEEES OR HONEY

We will with pleasure send a sample copy of the Semi-Monthly *Gleanings in Bee-Culture*, with a descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, Section Honey Boxes, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address written plainly, to

Ct A. I. ROOT, Medina, O.

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**DR. DYE'S**  
(BEFORE.) (AFTER.)  
ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address

VOLTAIC BELT CO., Marshall, Mich.

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And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

G. H. KNICKERBOCKER,

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PINE PLAINS, N. Y.

WHITEWOOD OR BASSWOOD SLICED SECTIONS, 4x4x4. A decided success. Can be used in Cases or Frames; \$2.00 per 1,000. Hives and Cases good and cheap. Address N. E. DOANE, Piestone, Berrien Co., Mich. 16Dt

Don't Fail to Send to the inventor and manufacturer of the **Bailey Swarm Catcher**, for Circular and Price List of Catchers and Bee Supplies.

16Dt J. W. BAILEY, Ripon, Wis.

# HELLO! HELLO! WE CALL

We are now ready to Book Orders for  
**Bee-Keepers' Supplies.**

White Poplar **SECTIONS** A Specialty.  
Dovetailed

Everything fully up with the times, and  
**At Lowest Figures!**

Send stamp for 32-page Catalogue and Samples.

**APIARIAN SUPPLY CO.,**  
7A6m WILTON JUNCTION, IOWA.

**FLAT-BOTTOM  
COMB FOUNDATION.**



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.  
**J. VAN DEUSEN & SONS,**  
Sole Manufacturers,  
Sprout Brook, Mont. Co., N. Y.

**Dadant's Foundation Factory, wholesale and retail.** See Advertisement in another column.

**\$66** a week at home. \$5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to **H. HALLETT & CO.,** Portland, Maine. 4A1y

**Muth's Honey Extractor,**

Square Glass Honey Jars, Tin Buckets,  
Langstroth Bee Hives, Honey Sections, etc.  
Apply to **C. F. MUTH,**  
976 and 978 Central Ave., CINCINNATI, O.

Send 10c. for Practical Hints to Bee-Keepers.

**A PRIZE.** Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At office address, **TRUE & CO.,** Augusta, Maine. 4A1y

**ALFRED H. NEWMAN,**

Dealer in all kinds of

**APIARIAN SUPPLIES,**

AND  
HONEY AND BEESWAX,

923 West Madison Street,

**CHICAGO, ILL.**

**MY ILLUSTRATED CATALOGUE**  
sent FREE upon application.

**Vandervort Comb Fdn. Mills,**

Send for Samples & Reduced Price-List.

AB1f **J. VANDERVORT,** Laceyville, Pa.

**Given's Foundation Press.**

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

**D. S. GIVEN & CO.,**  
1AB1f HOOPESTON, ILL.

**E. T. LEWIS & CO., Toledo, O.,**

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."

**GEO. B. PETERS, M. D.**

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

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Lock box 995, Belleville, St. Clair Co., Ills.  
18A13t 6B3t

**How to Prevent Swarming.**

Send for our 23d annual Circular for particulars.

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MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

**THE  
VICTOR HIVE**

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

**Practical Manner!**

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**

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**Italian Bees and Queens For Sale.**

Tested Queens, May, \$3.00; June, \$2.50; after July 1, \$2.00 each. Untested, after June 1, \$1.00; 6 for \$5.40. Full colonies in May, \$7.00; 2 for \$13.00; 10 for \$60.00. After June 1, \$1.00 less each colony Satisfaction guaranteed. **I. S. CROWFOOT,**  
12A8t Hartford, Wis., April 1, 1884.

**STANLEY'S AUTOMATIC  
HONEY EXTRACTOR.**

Reverses the combs without the aid of the hands; the reverse motion of the crank is all that is required. No time is lost, as we provide every machine with a brake to stop the motion, and the combs are half reversed when the motion stops. Can be used for 2 or 4 combs, as desired. No chance for combs to fall or get injured. The Comb Baskets always stop in the most convenient position for removing or putting in combs. We use XXXX Tin or Galvanized Iron for Cans. The Cylinder of Can is all in one piece. We challenge any Extractor, taking any number of combs, to do one-half the work of our 4-frame Machine. Prices reasonable.

**Stanley's Dollar Smoker, \$1.25 by mail.** Address,

**G. W. STANLEY & BRO.,**

14Atf WYOMING, N. Y.

**Dadant's Foundation Factory, wholesale and retail.** See Advertisement in another column.

**For Bees, Queens,**

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

**FLANAGAN & ILLINSKI,**

1AB1y Lock box 995, Belleville, St. Clair Co., Ills.

**Italian Queens! Nuclei.**

**SECOND TO NONE! ORDER NOW!**

I rear my QUEENS by the best methods and from the best stocks for business. I send out no Queens that I would not keep in my own apiary. To convince you, send me an order. I will please you.

Queens, untested in June, \$1.50; July, \$1.25  
" tested in " 2.50; " 2.00  
Nuclei, 1 frame (large) June or July, 1.00  
" 2 " (large) " " 2.00  
" 3 " (large) " " 2.50

Price of Queen to be added to prices of Nuclei. Will give special rates to parties who want two or three Nuclei with tested or untested Queens. Address,

**W. C. LESTER,**

Washington Hollow, Dutchess Co., N. Y.  
18A7t

**Dadant's Foundation Factory, wholesale and retail.** See Advertisement in another column.

**GOLD** for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address **STINSON & CO.,** Portland, Maine. 4A1y

**DOUGHERTY & MCKEE,**

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES AND HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

**BEE-KEEPERS,** before ordering your **BEE APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER,** Coburg, Iowa.

**Early Italian Queens!**

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS and BEAUTY.** Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

**J. P. H. BROWN,**

12D8t 4B4t AUGUSTA, GA.

**ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.**—It will pay you to send for Circular. **E. F. SMITH,** Sayona, N. Y. 11Atf

**Dadant's Foundation Factory, wholesale and retail.** See Advertisement in another column.

**BE SURE**

To send a Postal Card for our Illustrated Catalogue of **APIARIAN SUPPLIES** before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

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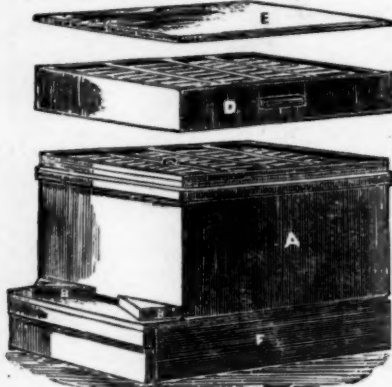
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1868. 1884.  
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COLUMN.



My New Langstroth Hive.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..\$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey.....\$3.00

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One Hive in the flat.....2.00

Five or over, each.....1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

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I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus,  $8\frac{1}{4} \times 16\frac{1}{4}$ , or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. My Circular gives prices.

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I am now ready to furnish white all-Dovetail Sections as follows:  $4\frac{1}{4} \times 4\frac{1}{4} \times 6$ , 7 and 8 to the foot, per 1,000, \$6.50;  $5 \times 6 \times 2$ , per 1,000, \$8.00. All shipped from here.

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Will receive terms for 1884 on application.

## BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

## CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

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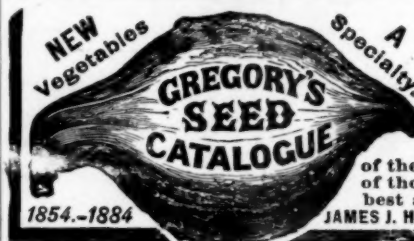
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All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all. JAMES J. H. GREGORY, SEED GROWER, MARLBOROUGH, MASS.

## Bingham Smoker

Borodino, N. Y., Aug. 15, 1882.

**Cyprians Conquered**—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,  
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Prices, by mail, post-paid.

Doctor smoker (wide shield) ..	$3\frac{1}{4}$ inch ..	\$2.00
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Large smoker (wide shield) ..	$2\frac{1}{4}$ " ..	1.50
Extra smoker (wide shield) ..	" ..	1.25
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Little Wonder smoker ..	$1\frac{1}{4}$ " ..	.65
Bingham & Hetherington Honey Knife, 2 inch ..	" ..	1.15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or  
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And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.

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COLONIES—8 Langstroth Frames, in light shipping box ..	\$ 4.50
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After June 1st, 25 per cent. off.

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## CHEAP! CHEAP!

Full Colonies, Nuclei and Italian Queens. Send for Price List before buying elsewhere. **DAN. WHITE,** New London, Ohio. 18A5t 5B1t

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